

## CHAIR'S MEMO:

Greetings, CEE alumni and friends!



Lisa Alvarez-Cohen

It is a pleasure to greet CEE alumni and friends in my first communication to you via the *Chair's Memo*.

In my opinion, there has never been a more exciting time to be a civil and environmental engineer.

Given the current state of infrastructure in California and beyond, and the need for sustainable growth and energy solutions, there are vast opportunities for exciting new research directions and for providing leadership in education. Here at Berkeley, our department is uniquely positioned to lead this renaissance of civil and environmental engineering.

We are proud that both our undergraduate and graduate programs are ranked #1 in the nation according to *U.S. News and World Report's* rankings for 2008. We are also extremely pleased to see that demand for CEE students has grown steadily over the past several years, and placement of our graduates in top quality positions has never been more successful.

Our classes are fuller than ever, and the energy within the department is palpable. Our concrete canoe, steel bridge and environmental challenge

CONTINUED TO PAGE 2

## CEE Advisory Council Helps Department Position Itself for the Future

The Department of Civil and Environmental Engineering has established its first Advisory Council. The Council is a volunteer group of professional engineers, business leaders, academic and higher education leaders, and government and policy officials who have strong interests in a dynamic civil and environmental engineering profession, who understand the important role of engineering education and research for addressing societal problems, and who support the mission of the University of California, Berkeley.

The members of the Advisory Council are:

**Eugene Herson (chair)** (CE B.S. '65, M.S. '66), retired president and CEO of EMCON Associates;

**Franklin Agardy** (CE M.S. '58, Ph.D. '63), president of Forensic Management Associates, Inc.;

**Joan Berkowitz**, managing director, Farkas, Berkowitz and Company;

**Rudolph Bonaparte (vice chair)** (CE M.S. '78, Ph.D. '81), president of Geosyntec, Inc.;

**David Friedman** (CE B.S. '75),

president of Forell/Elsesser Engineers, Inc.; **Paul Gilbert** (CE B.S. '59, M.S. '60), retired chairman of Parsons, Brinckerhoff Quade & Douglas, Inc.; **Michael Kavanaugh** (Chem Eng M.S. '64, CE Ph.D. '74), vice president of Malcolm Pirnie, Inc.; **Susan Leal (Economics B.S. '70, '75 Law)**, former general manager, San Francisco Public Utilities Commission; **Richard Luthy**, (Chem Eng B.S. '67, CE M.S. '74, Ph.D. '76), Civil and Environmental Engineering chair at Stanford University; **James van Hoften** (CE B.S. '66), consultant, Bechtel Corporation; and **Peter Yanev** (CE B.S. '68), retired co-founder of EQE International.



The CEE Advisory Council meeting in the new John A. Martin Conference Room in Davis Hall.



The Council meets twice yearly in the new John A. Martin Conference Room in Davis Hall (see related article on page 2). They participate in discussions with faculty on current hot research topics, strategic goals for the department, fundraising initiatives, liaisons with industry, and business leadership and entrepreneurship in civil and environmental engineering.

By networking with both faculty and students the Council gains an appreciation of the department's expertise and diversity. The Council is enthusiastic in helping CEE build leaders in the world of engineering, leaders who can influence and build both the business as well as the practice of engineering.

## Inside

- 2 **The John A. Martin Conference Room Provides New Space for CEE Meetings**
- 2 **John and Kathleen Dracup: Benefiting Future Generations at UC**
- 3 **CEE Students Help Rebuild New Orleans**
- 3 **New Graduate Student Society Fosters Unity Among CEE Students**
- 4 **In Memoriam**
- 5 **Samer Madanat Awarded Xenel Distinguished Professorship**
- 5 **Karl Pister Receives Clark Kerr Award and Distinguished Emeritus of the Year Award**
- 5 **CEE Graduates Help Grease the Way to a Clean Future**

## CHAIR'S MEMO

CONTINUED FROM PAGE 1

teams are all poised to provide strong competition this year, and we expect great results from them.

This past year has been a terrific one for the department. We have begun work on a new strategic plan to guide future decisions that will enable pursuit of research areas that take on new challenges. We have also implemented our revised undergraduate curriculum that integrates enhanced sustainability concepts and computing elements into the lower and upper division.

We are in the midst of two faculty searches, one in surface water hydrology and the other in high performance structural engineering. We are welcoming a new assistant professor to our faculty ranks, Evan Variano, an expert in water resources with interests in environmental fluid dynamics and turbulent mixing.

This year we have also ramped up the efforts and involvement of our CEE Advisory Council to support the mission of the department. Council members are working alongside CEE faculty on issues of outreach to alumni, development, and educating students on leadership and entrepreneurship.

I hope you enjoy all the articles in our newly christened newsletter, *CEE @ Berkeley Connections*. We chose the name *Connections* because this newsletter is one way we hope to connect up with our alumni and friends, and we hope it also serves as a way our alumni and friends can connect again with one another.

I invite you to stay connected with CEE at Berkeley. Visit our Web site at [www.ce.berkeley.edu](http://www.ce.berkeley.edu) often to keep up with activities in the department, and to follow the achievements of our outstanding faculty and students. Please update your alumni contact information at [www.ce.berkeley.edu/alumni](http://www.ce.berkeley.edu/alumni) so that you will receive all the news on the department.

I also encourage you to join the network of CEE's alumni and supporters in support of the department by making a financial contribution via Cal's E-giving Web site at [www.givetocal.berkeley.edu/makeagift](http://www.givetocal.berkeley.edu/makeagift). Every gift to the Department of Civil and Environmental Engineering plays a vital role in continuing CEE's excellence in education and research, enabling us to prepare future leaders in CEE, and supporting our unstinting commitment to public service.

Go Bears!

**Lisa Alvarez-Cohen**

Chair, Civil and Environmental Engineering  
[chair@ce.berkeley.edu](mailto:chair@ce.berkeley.edu)

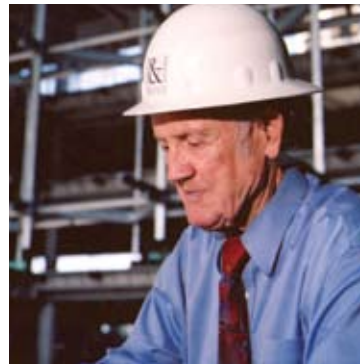
# The John A. Martin Conference Room Provides New Space for CEE Meetings

CEE has a new state-of-the-art conference room. The new room fixes a long-standing shortcoming of Davis Hall—the lack of a high-quality meeting space befitting the top-ranked civil engineering department in the nation.

The executive-level conference room was made possible by a donation from CEE alumnus John A. Martin (CE B.S. '43). In recognition of this donation and his generous support of the department over the years, the University of California, Berkeley has officially designated the new room as the *John A. Martin Conference Room*.

John A. Martin is the CEO of the Martin Associates Group of affiliated structural and engineering firms. He is a past President of the Structural Engineers Association of California, an organization dedicated to upgrading codes to meet the changing needs of building design. He is also a recipient of the *Alfred E. Lindau Award* from the American Concrete Institute for his many years of leadership in the seismic design of reinforced concrete structures.

The *John A. Martin Conference Room* was carved out of an existing large classroom (room 532) in Davis Hall. The reconfiguration involved dividing the space into a smaller classroom and



**John A. Martin**

the new conference room (room 542).

The room is approximately 600 square feet and has a capacity of 40 people. It is used for faculty meetings, guest speakers, seminars, and other large events. It was the site of the kick-off meeting of the CEE Advisory Council in November 2006 (see related article on page 1).

The new conference room is across the hall from the *T.Y. Lin Structural Engineering*

*Demonstration Laboratory*. The *John A. Martin Conference Room* and the *T.Y. Lin Structural Engineering Demonstration Laboratory* recognize two of the most prominent structural engineers who have graduated from the department.

Together these rooms transform the fifth floor of Davis Hall into CEE's headquarters for conferences, seminars, and other events marked for high visibility and extensive interaction among students, faculty, and industry visitors.

## John and Kathleen Dracup: Benefiting Future Generations at UC

John and Kathleen Dracup have been associated with the University of California for more than four decades, first as graduate students, then as faculty. Last year, they developed an estate plan that will benefit future generations at UC for many years to come.

John Dracup is a professor of the graduate school in the Department of Civil and Environmental Engineering at UC Berkeley. His wife, Kathleen, is dean of the School of Nursing at UC San Francisco. To continue their support of both campuses, they have designated \$500,000 gifts from their estate to go to each school.

Their gift to Berkeley, The John and Kathleen Dracup Scholarship, will provide fellowships to graduate students in environmental engineering. Their gift to UCSF will establish an endowed chair in the School of Nursing.

"I'm concerned about the recent increases in tuition," says John, "They may present insurmountable barriers to students who want to attend a UC campus, particularly those whose



**John and Kathleen Dracup**

parents may not have attended college and who have limited financial resources."

John's own background bears out his concern. He grew up in Seattle, where his parents were Scottish immigrants. Not having had the opportunity to attend college, they strongly encouraged their children to pursue higher education. After earning his bachelor's degree at the University of Washington and his master's degree at

MIT, John came to Berkeley in 1962 for his doctorate.

Kathleen, who grew up in Santa Monica, earned her B.S. at St. Xavier's University in Chicago. She later earned a master's degree at UCLA and a doctorate at UCSF.

"Both John and I were the beneficiaries of scholarships," adds Kathleen. "We could not have obtained our degrees without them, so we have a tremendous appreciation for the importance of scholarships."

John continues to be impressed with the quality of students that attend Berkeley. "These students truly are extraordinary," he explains. "They have enormous talent and also are focused on engineering as a career."



# CEE Students Help Rebuild New Orleans

In 2007, four CEE students traveled to Slidell, Louisiana, a suburb of New Orleans, to provide hands-on construction assistance in the wake of Hurricane Katrina.

The four students—recent graduates Lauren Huey, Danielle Hutchings, and Dan Tran, along with graduate student Brandon Kluzniak—were selected to participate in a reconstruction project sponsored by Montgomery Watson and Harza (MWH), a San Francisco Bay Area environmental engineering firm.

MWH asked students to submit an essay on the question, “Describe a civil engineering problem associated with Hurricane Katrina and how civil engineers should

address this problem.” Winning students would accompany MWH employees to Slidell to help the city’s Department of Parks and Recreation rebuild several playgrounds that were damaged during Hurricane Katrina. (Four of the MWH employees—Ayse Ercumen, Jennifer Gelmini, Dina Hunt, and Jasmine Leehang-Austin—are CEE alumni.)

The local chapter of Associated General Contractors heard of the project and contributed additional funding so that more students could travel to Louisiana.



**Assembling Playground Equipment: CEE students Lauren Huey (2nd from left) and Brandon Kluzniak (3rd from left)**

**“Civil engineers play a pivotal role in preventing this type of engineering failure from happening in the future.”**

**– Dan Tran**

The mayor of Slidell, Ben Morris, and many community residents expressed their gratitude for the students’ assistance. The students themselves were glad to have the opportunity to help in the rebuilding, yet they were struck by the immense amount of work that

is still to be done. “People have no idea of the devastation from what they see in the media,” says Huey.

“Seeing the devastation inspired us to think of ways civil engineers can become even more involved in shaping public policy,” says Tran. “Civil engineers play a pivotal role in preventing this type of engineering failure from happening in the future.”

“I wanted to be there to experience what had happened, to learn from it, and to help the people of New Orleans in some small way,” Hutchings adds. “Berkeley has taught me that as an engineer I have a responsibility to be socially aware and to use my knowledge to better society. This trip gave me a rare opportunity to put those teachings into action. The experience will frame my thinking as an engineer for the rest of my career.”



**The mayor of Slidell, Ben Morris, CEE students and other volunteers. CEE students include: Dan Tran (6th from left), Danielle Hutchings (8th from left), Lauren Huey (3rd from right), and Brandon Kluzniak (2nd from right).**

## New Graduate Student Society Fosters Unity Among CEE Students

A common experience of graduate students is that the focus necessary to complete the degree makes it difficult to network with other students. This is unfortunate because networking helps students expand and integrate their areas of research. Networking is a way to hear about internship, field, and job opportunities. Networking enables students farther along in the programs to advise those who have just started. And networking relieves stress, the other common experience of graduate students.



**Research Roundtable: first row (L to R) Jennifer Stokes, Kofi Inkabi, Kristen Parrish, Jose Manjarrez, Pedro Santos Vieira. Second row (L to R) Farook Hamzeh, Thais Alves, Zofia Rybkowski, Tai Lin Huang.**

Several CEE graduate students were determined to make networking easier. Last year, Patricia Decker (Structural Engineering, Mechanics and Materials), Kofi Inkabi (Engineering and Project Management), Greg McLaskey (Civil Systems), Kristen Parrish (Civil Systems), and Kristin Robrock (Environmental Engineering) organized the CEE Graduate Student Society. They created a constitution, registered the group with the UC Berkeley Office of Student Life, and then ambitiously set out to promote departmental unity among graduate students.

The Society kicked off the year by inviting incoming students, current students, and alumni to a Giants baseball game. This event coincided with orientation so students got to know each other even before classes began. This wildly successful event was followed by other events: a tour of San Francisco, a tailgate party before a Cal Bears football game, and monthly research roundtables and social hours. Whether at a social or more academic-oriented event, discussion among students often leads to research, creating an open flow of information across civil and environmental engineering disciplines.

The Society is now in its second year and promises to be even more successful.



**Ben C. Gerwick Jr.**, professor emeritus, known for his pioneering contributions to deep foundation construction and for making heavy construction engineering a part of scholarly research, died at age 87 on December 25, 2006.

Gerwick helped develop the use of prestressed concrete in bridge piers, foundation pilings and marine structures. In 2000, he was named among the 125 “Top

People of the Past 125 Years” by *Engineering News Record*.

Gerwick joined the CEE faculty in 1971. He co-founded CEE’s construction engineering and management program and was instrumental in developing the ocean engineering interdisciplinary program. His study of the techniques for placing concrete under water is a classic reference used by almost every major public works agency in the U.S.

Gerwick earned numerous honors over the years, including the top campus honor for faculty, the Berkeley Citation, in 1989. In 1974, he was elected to the National Academy of Engineering, the highest honor that can be accorded an engineer.

Contributions may be made to the Ben C. Gerwick Jr. Fellowship Award Fund, Department of Civil and Environmental Engineering, 760 Davis Hall, University of California, Berkeley, CA 94720-1710. This fund provides financial support for students whose studies are most consistent with Gerwick’s research and practice.



**Alexander C. Scordelis**, professor emeritus of structural engineering and a world-renowned expert on long-span bridges and pre-stressed concrete, died at the age of 83 on August 27, 2007.

Scordelis’ research influenced notable architectural achievements such as the dome of St. Mary’s Cathedral in San Francisco. In 1989, he was appointed to the Board of Inquiry into the Loma Prieta Earthquake. The

board issued a defining report in 1990 on the earthquake’s impact on California infrastructure.

Scordelis joined the CEE faculty in 1949. He held several leadership positions, including assistant dean of the College of Engineering. Scordelis received the Berkeley Citation, the highest honor for faculty, in 1990; the American Society of Civil Engineer’s Ernest E. Howard Award for contributions to the advancement of structural engineering; and the Award for Excellence in Engineering Teaching from the American Society for Engineering Education. He was also a three-time recipient of the Leon S. Moisseiff Award, established by the ASCE to recognize milestone papers in the field of structural design.

Memorial contributions may be made to the Alexander C. Scordelis Fellowship in Structural Engineering, Department of Civil and Environmental Engineering, 760 Davis Hall, University of California, Berkeley, CA 94720-1710. The fellowship supports graduate students interested in a teaching career in structural engineering.



**Robert Brady Williamson**, professor emeritus and leader in the development of fire safety engineering science education, died on August 1, 2007. He was 73.

Williamson’s work helped establish fire safety engineering as a recognized branch of science, as well as characterizing the fire hazards of plastics. His developments in fire safety engineering helped address gaps in building codes in the 1970s.

He developed the “corner test,” in which a small fire would be ignited in order to gauge flammability and combustibility of materials. This test proved to be far more accurate than conventional tests used at the time.

Williamson joined CEE faculty in 1968 and taught until his retirement in 2001. He was named a Professor of the Graduate School, a designation reserved for retired faculty who continue to contribute with distinction to the graduate program. As a teacher, he was known for his kindness and generosity towards his students and colleagues.

Among his numerous awards, Williamson earned the 2001 Arthur B. Guise Medal from the Society of Fire Protection Engineers and the 1988 Harry C. Bigglestone Award for Excellence in Communication of Fire Protection Concepts.

Donations in memory of R. Brady Williamson may be sent to the Berkeley Public Education Foundation, 1835 Allston Way, Berkeley, CA 94703, for a fund to be used to further science education and for the educational enrichment of science teachers.



**Francis H. Moffitt**, professor emeritus, renowned internationally in the field of surveying and photogrammetry, died at age 84 on April 21, 2007.

Moffitt gained prominence in the areas of photogrammetry and surveying. His textbooks, *Surveying* and *Photogrammetry*, set the standards by which other books on the topic were judged.

Moffitt helped transform surveying techniques through a project with Hewlett Packard to develop the electronic distance measuring device, which uses sound waves that bounce off solid targets to a handheld reflector to determine distances, both indoors and outdoors.

Moffitt used photogrammetry in innovative ways, including applications in bioengineering. He was a master at using the very basic and fundamental principles of photogrammetry and surveying to solve problems.

He joined the CEE faculty in 1951 and taught until his retirement in 1987.

Moffitt earned many distinctions throughout his career, including election to an honorary membership at the American Society of Photogrammetry and Remote Sensing (ASPRS), which is the organization’s highest honor. He received numerous presidential citations from ASPRS, where he served as vice president and president between 1976 and 1979. On the international scene, he worked as a foreign correspondent for the International Society for Photogrammetry and Remote Sensing.



# Samer Madanat Awarded Xenel Distinguished Professorship

CEE Professor Samer Madanat, director of the Institute of Transportation Studies, has been named the first recipient of a recently endowed distinguished professorship in the College of Engineering.

The Xenel Distinguished Professorship was established by former engineering alumnus Khalid Alireza, vice-chairman and executive director of Xenel Industries of Jeddah, Saudi Arabia. The purpose of the professorship is to address issues common to California and to the Organization of Islamic Conferences (OIC) region, which stretches from western Africa to Indonesia.

For Madanat, whose research background includes civil infrastructure systems management, the professorship offers an opportunity to broaden his research into another area of interest—sustainable urban transportation systems.

“In many large cities of the OIC region, there is a need to develop transportation systems with a lower environmental footprint, both in terms of energy consumption and vehicle emissions,” explained Madanat. “These problems exist in the United States as well, but the best solutions will be different. In the former context, the high urban densities can support effective public transportation, which may substitute for automobiles. In the latter, the potential for mode shift toward mass transit is very small—reduction in greenhouse gases is more likely to result from significant increases in the use of appropriate alternative fuels.”



**Samer Madanat teaches CE 261: Infrastructure Systems Management**

Working with colleagues at ITS, Madanat is investigating new methods for planning such systems and applying them to rapidly motorizing cities in the developing world. “The lessons learned are transferable to cities in the countries of the OIC.”

Madanat earned his Bachelor of Science degree from the University of Jordan, and Master’s and Ph.D. from the Massachusetts Institute of Technology. Before becoming director of ITS in 2005, Madanat served as director of California Partners for Advanced Transit and Highways (PATH). He is the editor-in-chief of the *Journal of Infrastructure Systems* of the American Society of Civil Engineers, and the author of more than 50 articles in archival journals. In 1999 he received the Science and Technology Award from the Office of the President of the University.

## CEE Graduates Help Grease the Way to a Clean Future

By Susan Leal, CEE Advisory Council Member



**San Francisco Mayor Gavin Newsom and Susan Leal inspect pilot program to produce biofuel at the local level.**

Cities looking to reduce their “carbon footprint” and dependency on fossil fuels are increasingly turning to biofuel as part of the solution.

The California Energy Commission recently gave the San Francisco Public Utilities Commission (SFPUC) a \$1 million grant to pilot a recycled used cooking oil or “brown grease” biofuel plant in one of San Francisco’s wastewater treatment plants.

Two CEE graduates lead the project. They are Dr. Domènec Jolis (CE Ph.D. ’92), the project’s principal investigator, and Jonathan Loiacono (CE B.S. ’72), the project manager. Both work with the SFPUC’s Wastewater Engineering Division. They understand that, if successful, their project will serve as a model for wastewater facilities throughout the nation.

The project seeks to introduce, and make market-ready, a standardized packaged brown grease recovery and biodiesel production plant. The plant will demonstrate that brown grease can

## Karl Pister Receives Clark Kerr Award and Distinguished Emeritus of the Year Award



**CEE Professor Emeritus Karl Pister has received the Clark Kerr Award for Distinguished Leadership in Higher Education from the Berkeley Division of the**

**Academic Senate.**

The award recognizes exceptional contributions to the advancement of higher education. The award citation notes Pister’s “multidimensional contributions to higher education within a framework of idealism and practicality, his outstanding scholarship, his leadership at critical times in the history of California, and his collegial sense of obligation and service in the legacy of Clark Kerr.”

Earlier Pister received the Distinguished Emeritus of the Year Award. The award was created by the Board of UC Berkeley Emeriti Association to recognize individuals who have continued to do extraordinary work as scholars, teachers, and community activists after their retirement.

Both awards honor Pister’s varied and profound devotion and service to the university. This service includes serving as a CEE faculty member (1952-1996), chair of the Academic Senate (1979-1980), dean of the College of Engineering at Berkeley (1980-1990), and Chancellor of UC Santa Cruz (1991-1996).

After retirement, Pister served UC President Richard Atkinson for four years in a variety of roles at the Office of the President, and after returning to the Berkeley campus he became the interim director of Berkeley’s Center for Studies in Higher Education.

Throughout every avenue of service, Pister has been passionate about increasing the diversity of students in the College of Engineering. Currently he serves on the Berkeley Division Committee on the Status of Women and Ethnic Minorities.

Pister’s most recent contributions to Berkeley involve leading the 30-member Memorial Stadium Advisory Committee for the Southwest Campus Integrated Projects (SCIP). He accepted this challenging assignment at the request of Chancellor Birgeneau

CONTINUED TO PAGE 6

CONTINUED TO PAGE 6

# What's Inside

**In this Issue:**

**COVER STORY:** CEE Advisory Council Helps Department Position Itself for the Future

**PAGE 2:** The John A. Martin Conference Room Provides New Space for CEE Meetings

**PAGE 3:** CEE Students Help Rebuild New Orleans

**PAGE 5:** Samer Madanat Awarded Xenel Distinguished Professorship

**A CLEAN FUTURE** *CONTINUED FROM PAGE 5*

be recovered cost-effectively from waste fats, oils, and grease concentrated to 99% purity and used as a feedstock for the production of ultra-low sulfur biodiesel. In addition, the project will validate the benefits of co-locating these facilities at wastewater treatment plants.

As the world continues to look for innovative ways to develop more sustainable energy sources and combat climate change, people will be counting on projects like the brown grease plant. The next generation of Cal's civil and environmental engineers is making the world a healthier and safer place.

**KARL PISTER** *CONTINUED FROM PAGE 5*

in 2005. Since then he has led the planning for projects with the Cal athletics program, the Boalt Hall-School of Law, and the Haas School of Business.

Cathy Koshland, vice provost for academic planning and facilities, who has worked with Pister on the southeast-campus projects says, "His capacity to take on things is remarkable. Karl continues to be able to facilitate, to lead, to bring people together, to ask very good questions. I think he is an incredible citizen of this campus and the UC system, and every day demonstrates leadership, provides his wisdom, and continues to give."

*CEE @ Berkeley Connections* is produced by the Civil and Environmental Engineering Department at the University of California, Berkeley, Editor: Holly Halligan (*halligan@ce.berkeley.edu*); Design: Cuttriss B Hambleton, Berkeley, CA; Printing: University of California Printing Services, Images: Armando Aronzo, Phyllis Orrick, Jacqueline Penzien, Peg Skorpinski, and Iris Tommelein.

[www.ce.berkeley.edu](http://www.ce.berkeley.edu)

ADDRESS SERVICE REQUESTED  
 www.ce.berkeley.edu  
 Berkeley, CA 94720-1710  
 760 Davis Hall  
 Civil and Environmental Engineering  
 University of California